3: Mirchuk Ukraine RDl
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[For transportation systems of Ukraine, see category 116, pp. 189-197.]

3: Mirchuk S-4 (no date) 1949 RDl Ukraine RDl

Communications

1. Conditions and Modes of Communication

489 The communication system of Ukraine is far from satisfactory, although natural conditions favor the construction of roads and railways and communication by ship. The defects in the Ukrainian network of communication are due rather to historical causes: the fact that it belongs to a state that has never been able to maintain an orderly system of communication is the main reason for the inadequacy of communication routes and facilities in Ukraine.

As the sea forms only ¼ of the entire frontier of Ukraine and as the nation was shut off from it for centuries by peoples of other races, it never became a main artery of communication for the country. The rivers, once so important as channels of communication and colonisation have declined more and more with the increasing claims made by modern transportation.

Country roads cannot be included in a system of long-distance communication. Geological conditions in some districts are unfavorable but an incapable policy of communications and economy is mainly responsible for the present situation.

2. Railroads

490 The railway is therefore the most important element in the system of communications; 209 million t were transported by rail in 1934 as compared with 5.8 million t by river and 8.5 million t by sea.

The first railroad was constructed in 1863—65 from Odessa to Balta (260 km) and was extended in 1870 to Kirovohrad. This

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

316 mines of the Krivoi-Rog and secondly the presence between these two centres, in the surroundings of Nikopol, of important deposits of manganese, whose annual extraction exceeds 1,000,000 tons.

Actually the proximity of the mines of Krivoi-Rog, the resources of which, according to the exact estimates of geologists, are considerable (1 milliard 100 million tons of mineral which contains 40 per cent of iron), has allowed the distribution of the whole iron industry of the Ukraine between these two regions—that of the 316 Donietz and that of Krivoi-Rog. This centralization 429 allows one to utilize on the spot the enormous quantities of coal and of employing the railways in the most economical way, thus reducing the transport charges which are a heavy item in relation to a material.

The whole traffic between these two regions goes in two directions. The coal of the Donietz is loaded on trucks which are directed towards the Krivoi-Rog. These trucks return with a load of minerals. Thus a continual exchange takes place between these two centres, resulting in a very small circulation of empty trucks and thus creating one of the essential conditions of a rational exploitation of the railways.

316 The centralization of the Ukrainian metal industry 423 strongly favours its development. The Ukraine to-day occupies one of the leading places in the production of pig-iron (the fourth place, with 6,500,000 tons annually), of steel (third place, with 5,000,000 tons annually), and of sheet-iron (fifth place, with 3,000,000 tons annually).

327 The shaping of the metal and its transformation into metallic manufactured objects is equally concentrated on the borders of these two producing regions. Thus only 18 per cent of the coal of the Donietz and 5 per cent of the raw mineral of the Krivoi-Rog are exported from the Ukraine. The rest is shaped and worked on the

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

433 to enlarge upon the reasons which have determined the destruction of the favourable results which ought to have appeared in this direction. We shall only limit ourselves to enumerating the more important points.

1. The defective distribution due to frequent failures of transport which are expressed by the accumulation of unused manufactured goods in the great industrial centres and by the irregularity of furnishing the factories with raw materials.

2. The very inferior quality of the manufactured goods, the enormous percentage of rejects, the continuous shortage of spare parts required for the normal functioning, and the upkeep of the machines. These defects are due to an insufficient technical staff, to low wages and salaries, and to the police system introduced into the administration of the industries.

3. The lack of co-ordination between the different branches of industry, the poor condition of State commerce, due to the incompetence of the staffs and to the very complex and very slow bureaucratic procedure.

Nevertheless, imperfect though they may be, the new mines and factories exist and under other political and economic conditions, accompanied by the revival of agriculture, of foreign commerce, and of a better functioning of transport, the Ukraine would be put on the same economic level as the best organized and the richest countries of the world.

IV

Means of Communication

496 In no other sector of economic activity does the link
489 between the Ukraine and the rest of Russia become so clearly apparent as in the matter of the organization of

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

the railway system. At a superficial glance at the map we immediately see that the main railway lines follow the ancient riverways which unite the Black Sea with the rest of Russia. Towards the north, however, they divide into two important branches, that of Leningrad, the old direction to Novgorod, and that of the new direction to Moscow. The Russian railways radiate from these two centres, Moscow and Leningrad, to end in the numerous ports of the White, Black, or Caspian Sea or the Pacific Ocean or at the western and eastern frontiers of the State.

In this Russia does not differ much from, say, France where, too, the railway network converges towards Paris as a centre.

Forming a part of the Russian railway system, the Ukrainian main lines are only sections or continuations of the Russian main lines, starting, as we have said, from Leningrad or Moscow.

These are the lines : (Leningrad–Jlobin)[1]–Sarny–Kiev. (Leningrad–Vilno–Rovno)–Kazatyne–Odessa. (Moscow–Koursk)–Kharkov–Sinelnikovo (Sebastopol) and (Moscow–Koursk)–Kharkov–Marioupol–(Rostov-on-Don–Caucasus). (Moscow–Briansk)–Koupiansk–Lougansk.

The Ukrainian network, including the continuations of the great Pan-Russian lines, whose length totals 14,500 kilometres (31 kilometres of rail for each 1000 square kilometres and 4·6 kilometres per 10,000 inhabitants), can be divided into four distinct classes :

1. *Lines for the export of corn* uniting the agricultural regions with the ports of the Black Sea. The direction of these lines can only be justified by the conditions of a normal expansion of grain export and the importation of colonial produce, to which the advent of Soviet rule has brought an unfavourable change.

[1] The towns put in brackets are outside Ukrainian territory.

[See category 116, p. 151. --- Analyst]

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

000 The import and export were characteristic of the pre-Great War Ukrainian economy. To-day these factors are almost absent.

496 At the beginning of the twentieth century a railway called the corn line had been constructed, with termini at Romny and Libava, a port on the Baltic now belonging to Latvia and recently partly given back to Russia by special treaty, for the corn export trade. It is clear that to-day its Ukrainian section, which does not exceed 250 kilometres, has only a very restricted local interest. Recent events may bring some changes here.

The movement of merchandise on the network which, before the Great War, had been most important in the direction from north to south, takes to-day an opposite direction and brings the surplus of cereals from the southern region towards Kharkov and Moscow. As to the most recent grain line, the construction of which had been begun in 1913 and had been completed after the Revolution, connecting Kherson and Nicolaiev to Kharkov via Zaporojie, it has to-day acquired a purely industrial character and serves to transport metal and coal to the factories of Kharkov on the one nand and to those of Kherson and Nicolaiev on the other.

489 2. *Means of communication* which serve the mines of
496 Krivoi-Rog and the coal basin of the Donietz. The region of the Donietz has a sufficiently close network and is provided with many lines with a double track which connect the different mines. Nevertheless this network was clearly insufficient already before the last war, when the annual production of coal was only 40 per cent of that of to-day. The enormous accumulation of unused coal at the stations, as a result of the weakness of the transport system, had forced pre-Great War Russia to import coal from England.

The network of the Donbass is linked with the Krivoi-

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

Kog by a main line which is devoted to the continual exchange of coal for mineral. The stock of this mine is the most powerful of the Union and the average loading per axle (about 4·5 tons) is the highest in Europe. The system of the coal network is characterized by the working of the raw material in the proximity of the districts of extraction. Numerous branch lines are prolonged into supplementary lines which radiate towards the outer regions, to end at the great centres at which the metals are worked. This whole network, destined for the transport of heavy materials, and which dates from the last decades of the nineteenth century, is in general very well constructed and even partly reinforced by electric welding.

The only railway of importance constructed since the October Revolution, which joins the industrial network, is that which links Moscow to Lougansk. The direction of this line confirms the continuation by the Soviet Government of the traditional economic policy, in tending to organize the Russian railway system on the Imperial plan.

3. *Strategic lines* are represented by the line Odessa–Kiev, with a double track and with numerous branches towards the Polish and Rumanian frontiers, some of which continue in a direction of Lvov, others to Kovel, to end at Warsaw.

The exploitation of these mines, since the establishment of the Russo-Polish frontier after 1920, was fundamentally changed. As a result of being cut by the frontier, they had lost their importance as strategic lines, since the principal junctions, such as Kovel or Rovno, specially intended for this purpose, were recently outside the frontiers of the Soviet Ukraine. Parallel to this they had experienced a diminution of traffic owing to the most complete disappearance of trade with Poland.

9: Prothero G-4 (no date) 1920 RD1 Ukraine RD1

in the Government of Yekaterinoslav in the Donets coal and iron region. 491

The second-class roads, described as 'paved throughout', have a mileage of 953. They are under the care of the *zemstvos*, but the expenditure bestowed upon them is small.

The third class of roads, described as 'soil' roads, has by far the greatest mileage, their length being 54,148 miles. In no country of western Europe would they be classed as roads, being merely tracks from point to point, worn by the traffic of the district. They are under the care of the *mirs*, or communes, whose budgets admit of the expenditure of very small sums on their upkeep.

As other means of communication are also few and unsatisfactory, the lack of good roads would be a fatal drawback to any development of the country, were it not for the fact that during three or four months of the year traffic by sledge is almost everywhere possible without special regard to the existence of a road or even a track. As during this period agricultural operations are suspended, an opportunity is afforded of transporting a vast quantity of goods. 491 491

(*b*) *Rivers and Canals*

The rivers of the Ukraine include the middle and lower courses of two large rivers, the Dnieper and the Dniester. Both are navigable for long distances, and should be of great importance as means of communication. Each, however, suffers from a serious natural defect which much curtails its usefulness, and to remedy which no adequate measures have been taken. 487 [133]

For purposes of navigation the river *Dnieper* falls into two sections known as 'above the rapids' and 'below the rapids'. Between Yekaterinoslav and Alexandrovsk are ten rapids, which are very dangerous and completely prevent navigation. Timber rafts are floated down, but the occupation of steering them is considered most hazardous and is entrusted to local pilots specially trained. Some attempt at improving

Production of Building Materials

339 In connection with the reconstruction work being carried out in
186 the Ukraine, the production of building materials is extremely important. The Five-Year Plan lays down that the pre-war production of bricks is to be increased by 50 per cent. of tiles, by 170 per cent. of lime, by 120 per cent., and of gypsum by 190 per cent. The Plan also states that

> "Plants for the production of building materials - including cement, glass, brick, lime, and tile works, plants producing metal fixtures, prefabricated houses, building sections, plumbing fixtures, roofing materials and high tensile gypsum - shall be restored or built and stable local fuel and power supplies created for the building material plants."

The Ukrainian output of cement in 1950 is expected to be 2,065,000 tons as compared with 10,500,000 tons for the entire U.S.S.R.

[323] Under the jurisdiction of the Republic and local authorities there are to be put into operation in the years 1946-50 glass works with a capacity of 11-33 million square feet of glass, brick kilns with a capacity of 9 million bricks, and rolling mills and other building material plants.

Transport

727 The war and the occupation brought great devastation to the
489 transport system of the Ukraine. The greater part of the railroads were partially or completely destroyed, and many hundreds of railway bridges demolished. The port of Odessa on the Black Sea was systematically destroyed - piers, warehouses, elevators, floating cranes, and power supply. The Dnieper-Bug Canal, the only water outlet towards the west, was made impassable by the Germans, who destroyed the sluices, wrecked bridges, sank boats in midstream, and choked the canal with mud.

185 The Five-Year Plan, 1946-50, provides for the complete rehabili-
489 tation of Ukrainian transport. Railway lines and junctions, and locomotive and car repair works are to be fully restored. A number of railway lines are to be electrified; and west of the Dnieper several narrow gauge lines are to be constructed for closer connection of sugar beet growing areas with sugar refineries.

185 To alleviate the difficult situation in rail transport, motor
489 roads are to be rebuilt and extended. The Moscow-Kharkov highway is
499 to be rehabilitated and improved, and additional motor roads are to be built to connect towns of the Ukrainian S.S.R. with the towns of the North Caucasus and the Crimea. By 1950 the tonnage of freight transported by road should be 16 times the pre-war volume. The number

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494 of road passengers should increase 7½ times; and the number of buses, by 3,000.

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503 The Five-Year Plan also provides for the expansion of river and sea traffic. Small rivers are to be extensively adapted for navigation, and will also be utilized for local hydro-electric power supplies. Shipbuilding yards are to be rebuilt, and the tonnage of river and sea traffic is to be considerably increased. The freight turnover on small rivers of the Ukraine in 1950 is fixed by the Five-Year Plan at 450,000 metric tons.

Pre-War Traffic

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489 In 1937 the Ukrainian railways handled 313.1 million metric tons of loads, as compared with 165.7 million in 1932. The river transport carried 7.7 million tons (4.7 million in 1932), while in the same year Ukrainian seaports handled 8.6 million tons as against 6.5 million tons in 1932.

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497 The U.S.S.R.'s system of rail transport is perhaps the weakest
U link in the Soviet economy. In 1937 the railway network of the entire
497 Soviet Union amounted to only 86,400 kilometres (83,400 kilometres in 1933). The construction of additional lines had by no means kept pace with the expansion of industry and agriculture. The Ukraine in 1937 had some 14,400 kilometres of railway lines; and traffic loads in that year amounted to some 313.1 million metric tons. The inadequacy of the system if compared with other European countries is marked. For example, in France (the area of which was approximately equal to that of pre-war Ukraine) the length of the principal lines open for traffic on January 1, 1938, was 42,000 kilometres.

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497 The war has greatly disrupted Ukrainian rail transport. Locomotives, rolling stock and tracks were heavily damaged or destroyed. The problem of rehabilitation is especially serious, because the lack of adequate transport facilities hinders other rebuilding projects. The locomotives and cars taken as reparations from Germany, being chiefly of narrow gauge, are consequently of no use on most existing Soviet tracks.

Production of Long Distance Locomotives

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397 Before the war the output of long distance locomotives in the Ukraine was as follows.